

ABSTRACT OF THE DISCLOSURE

A transducer assembly is provided with an ultrasonic transducer, a capacitor, and a transformer enclosed within a protective housing, and an acoustic block. The transducer is adhered to the acoustic block, and the materials of the transducer, acoustic block, and adhesive are selected so that when the transducer assembly is adhered to an aluminum boat hull, acoustic energy loss due to attenuation is mitigated. The secondary winding of the transformer and the capacitor form a resonant circuit that is wired to the ultrasonic transducer and helps to reject some of the acoustic-generated hull noise that may reach the transducer. The transformer steps up the voltage pulses to the transducer. In use, the transducer assembly is wired to a sounding unit, which provides the voltage pulses for generating ultrasonic pulses, and processes electrical signals from the transducer that correspond to ultrasonic echoes.